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> Goodman GR9S80 Series 60,000 BTU 4 Ton 80% AFUE Propane Gas Furnace User Manual

Goodman GR9S800604BN

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Model Number: GR9S800604BN

1. INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of your Goodman GR9S80 Series Propane Gas Furnace. Please read all instructions thoroughly before proceeding with any installation or service procedures. Retain this manual for future reference.

Safety Warning: Improper installation, adjustment, alteration, service, or maintenance can cause property damage, personal injury, or loss of life. Installation and service must be performed by a qualified installer, service agency, or the gas supplier.

2. PRODUCT OVERVIEW

The Goodman GR9S80 Series Propane Gas Furnace is designed to provide reliable and energy-efficient heating for residential applications. This unit features a single-stage, 9-speed ECM blower and a premium heat exchanger, contributing to consistent comfort and operational efficiency.



Image 2.1: Front view of the Goodman GR9S80 Series Propane Gas Furnace.

Key Features:

- **Heating System:** Single-stage, 9-speed ECM blower for efficient air circulation and a premium heat exchanger for reliable warmth.
- **Efficiency:** 80% AFUE (Annual Fuel Utilization Efficiency), indicating that 80% of the fuel consumed is converted into usable heat for your home.
- **Installation Flexibility:** Designed for both upflow and horizontal configurations, suitable for various installation environments such as attics or basements.
- **LP Kit Included:** This model includes an LP (Liquid Propane) conversion kit, allowing operation with propane gas. The unit is factory-ready for natural gas.
- **Refrigerant Compatibility:** R32 New Refrigerant Compliant.

3. SPECIFICATIONS

The following table details the technical specifications for the Goodman GR9S80 Series Propane Gas Furnace (Model GR9S800604BN):



SPECIFICATION

AHRI NUMBER: 215358051

HEATING: 60,000 BTU/h

STAGE TYPE: Single Stage

MAXIMUM CFM: 1200 (4 Ton)

VENTING TYPE: Metal Flue

BLOWER TYPE: 9 Speed - ECM

IGNITOR TYPE: Durable Hot

SHIP WEIGHT: 108 lbs (48.99 kg)

ELECTRICAL: 115v 1-Phase 60 Hz

ORIENTATION: Upflow/Horizontal

LP KIT FOR PROPANE: LPM-31
Unit is ready for Natural Gas

PRODUCT FEATURES: R32
New Refrigerant Compliant

WARRANTY INFORMATION:
20yrs Heat Exchanger and 10yrs
Parts with Online Registration

Image 3.1: Detailed specifications of the furnace unit.

Specification	Value
Model Number	GR9S800604BN
AHRI Number	215358051
Heating Capacity	60,000 BTU/h
Stage Type	Single Stage

Specification	Value
Maximum CFM	1200 (4 Ton)
Venting Type	Metal Flue
Blower Type	9 Speed - ECM
Ignitor Type	Durable Hot Surface Ignitor
Electrical Supply	115V, 1-Phase, 60 Hz
Orientation	Upflow/Horizontal
LP Kit	LPM-31 (Included for Propane Conversion)
Product Dimensions (L x W x H)	28 x 17.5 x 33.37 inches
Shipping Weight	108 lbs (48.99 kg)



Image 3.2: Visual representation of the furnace dimensions.

4. SETUP AND INSTALLATION

Important: Installation must be performed by a qualified HVAC technician in accordance with all local and national codes and regulations.

4.1 Orientation

This furnace supports both upflow (vertical) and horizontal installations.

Upflow (Vertical) Installation:

In an upflow configuration, the heat exchanger is positioned at the top of the unit. Air is drawn in from the side or bottom, heated, and then released upwards. This setup is commonly used in basement installations and is known for its energy efficiency due to natural convection.

UPFLOW (VERTICAL)



An upflow furnace is a heating system where the heat exchanger is positioned on top of the unit. It works by pulling in cool air from the side or bottom, heating it and then releasing the warm air from the top.

This design is commonly used in basement installations because the natural convection of air rising makes it effective for heating multiple levels of a home. Plus, upflow furnaces are known for their energy efficiency, making them a cost effective choice for maintaining a comfortable indoor environment.

***THIS LISTING WORKS WITH
UPFLOW AND HORIZONTAL**



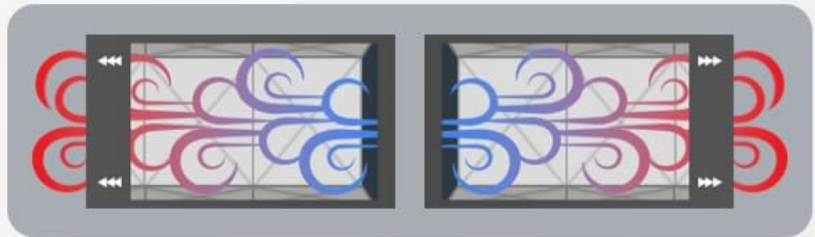
Image 4.1: Diagram illustrating the airflow in an upflow (vertical) furnace configuration.

Horizontal Installation:

For horizontal installations, typically in attics, ensuring unobstructed airflow from one side to the other is crucial. This configuration offers versatility and adaptability to airflow in either right or left directions, helping to prevent cold spots and promote even heating.



HORIZONTAL (RIGHT/LEFT)



When installing a coil and furnace unit horizontally, it's essential to ensure unobstructed airflow from one side to the other. This config is commonly used in attic installations due to its versatility and adaptability to airflow in either right or left direction.

The horizontal orientation effectively addresses the unique challenges of attics, such as temperature fluctuations. Promotes even heating through out the space, preventing cold spots. Design considerations, like duct placement and condensate drainage, play a crucial role in maximizing efficiency in this setup.

***THIS LISTING WORKS WITH
UPFLOW AND HORIZONTAL**

Image 4.2: Diagram illustrating the airflow in a horizontal furnace configuration.

4.2 LP Conversion Kit

The furnace is factory-configured for natural gas. An LP conversion kit (LPM-31) is included to convert the unit for use with propane gas. This conversion must be performed by a qualified technician.

LP CONVERSION KIT

Convert your *furnace* to run on *propane* with this *easy-to-install LP conversion kit*. Designed for optimal performance, it ensures safe and efficient heating for homes in areas without natural gas access. Get the flexibility to power your furnace with propane while maintaining the high efficiency Goodman is known for.



Image 4.3: Components of the LP conversion kit.

5. OPERATING INSTRUCTIONS

Once installed and properly configured by a qualified technician, your Goodman GR9S80 Series furnace will operate automatically based on your thermostat settings.

5.1 General Operation

1. Set your thermostat to the desired temperature and heating mode.
2. The furnace will cycle on and off as needed to maintain the set temperature.
3. The 9-speed ECM blower will adjust its speed to optimize airflow and efficiency.

5.2 Energy Efficiency

This furnace operates at 80% AFUE, meaning a high percentage of the fuel is converted into heat. The actual energy performance can vary depending on the type of air handler or blower installed and the overall system configuration. Refer

to the Energy Guide for detailed efficiency ratings.

ENERGY GUIDE FORMAT

The **efficiency** of this **furnace** can greatly improve depending on the type of **air handler or blower** installed by your contractor, as high-quality components enhance heating performance and overall energy efficiency.

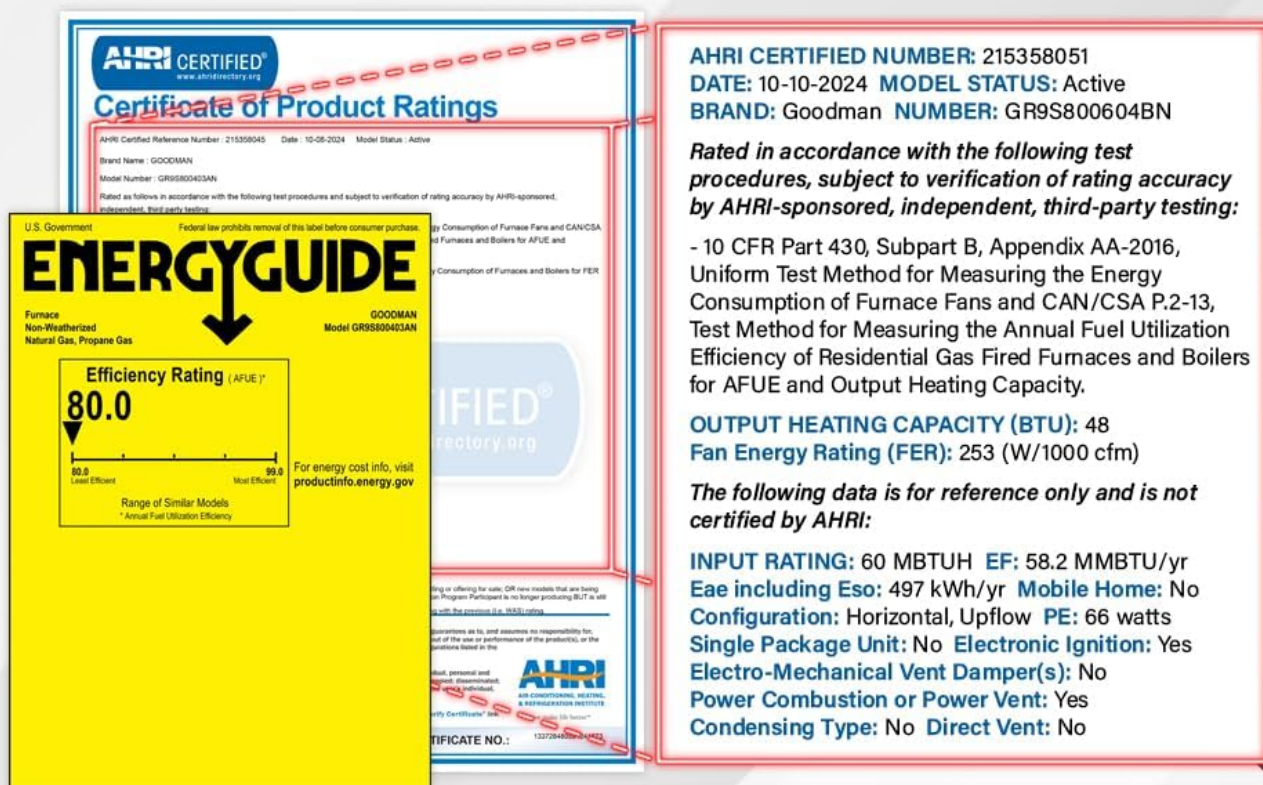


Image 5.1: Example of an Energy Guide label, providing efficiency information.

6. MAINTENANCE

Regular maintenance is crucial for the longevity and efficient operation of your furnace. It is recommended to have your furnace inspected and serviced annually by a qualified HVAC technician.

6.1 User Maintenance

- **Air Filter:** Check and replace or clean the air filter monthly, or more frequently if the furnace is in constant use or if you have pets. A dirty filter restricts airflow and reduces efficiency.
- **Clear Area:** Ensure the area around the furnace is clear of obstructions, combustible materials, and debris to allow for proper ventilation and safe operation.

6.2 Professional Maintenance

An annual professional inspection should include:

- Checking and cleaning the heat exchanger.
- Inspecting the burner and ignition system.
- Verifying proper gas pressure and connections.
- Testing safety controls and electrical components.
- Lubricating moving parts as necessary.
- Inspecting the flue system for blockages or leaks.

7. TROUBLESHOOTING

If your furnace is not operating correctly, consider the following basic troubleshooting steps. For complex issues or if these steps do not resolve the problem, contact a qualified HVAC technician.

- **No Heat:** Check the thermostat setting, ensure the furnace power switch is on, and verify that the gas supply valve is open. Check for tripped circuit breakers.
- **Insufficient Heat:** Ensure the air filter is clean. Check for blocked vents or registers.
- **Unusual Noises:** Strange noises can indicate a mechanical issue. Turn off the furnace and contact a technician.
- **Pilot Light/Ignition Issues:** If the furnace uses a pilot light (though this model uses a hot surface ignitor), ensure it is lit. For ignitor issues, professional service is required.

8. WARRANTY INFORMATION

Your Goodman GR9S80 Series furnace comes with a comprehensive warranty, subject to online registration and compliance with local and state installation codes.

- **Lifetime Heat Exchanger Warranty** (with online registration)
- **10-Year Unit Replacement Warranty** (with online registration)
- **10-Year Parts Warranty** (with online registration)

Failure to register online will result in default warranty coverage of 20 years for the heat exchanger and 5 years for parts.

Note: This furnace does not comply with California Low NOx and Ultra-Low NOx regulations.

9. SUPPORT AND CONTACT

For technical assistance, warranty claims, or professional service, please contact your installing HVAC contractor or the Goodman customer support. Always provide your model number (GR9S800604BN) and serial number when seeking support.

For general product information, you may visit the Goodman official website.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question